UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R051XA007NM

Site Name: Gravelly Fan (WP-1, HV-1,2)

Precipitation or Climate Zone: 9 to 14 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on mountain outwashes, alluvial fans and footslopes. Arroyos and small drainages often dissect it. Slopes range from 3 to 20 percent and are quite variable. Elevation ranges from 7,800 to 8,500 feet above sea level.

Land Form:

1. Alluvial fan
2. Fan remnant
3.

Aspect:

1. N/A
2.
3.

	Minimum	Maximum
Elevation (feet)	7,800	8,500
Slope (percent)	3	20
Water Table Depth (inches)	N/A	N/A

Flooding:	**Minimum**	**Maximum**
Frequency	N/A	N/A
Duration	N/A	N/A

Ponding:	**Minimum**	**Maximum**
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

Negligible to medium.

CLIMATIC FEATURES

Narrative:

Mean annual precipitation varies from 9 to 14 inches. Deviations of 4 inches or more are quite common. Approximately 60 percent of the precipitation is received during the native plant growth period, April through September. During July, August and September 4 to 5 inches of precipitation influence the presence and production of warm-season plants. Fall and spring moisture is conducive to the growth of cool-season herbaceous plants. Maximum shrub growth also occurs during this time. Summer precipitation is characterized by brief, localized thunderstorms. Winter moisture usually occurs as snow or light rain.

Mean annual temperature varies from 64 degrees F in July to 21 degrees F in January. The maximum is near 100 degrees F. The minimum is near 40 degrees F. The average last killing frost in the spring is around mid-May. The first killing frost in the fall is late September or early October. The frost-free period is approximately 120 to 140 days, but freezing temperatures have been recorded for every month except July and August. Temperatures are generally conducive for herbaceous plant growth from April through September.

Wind velocities are relatively light most of the year with stronger winds occurring in spring and early summer. These stronger winds, which may exceed 25 miles per hour, increase transpiration rates of plants and rapidly dry the soil surface. Also, small particles are often displaced by the stronger winds, which can result in structural damage to native plants, particularly young seedlings.

Climate data was obtained from the WCCR web site. Using 50% probabilities for freeze-free and frost-free seasons at 28.5 degrees F and 32.5 degrees F respectively.

	Minimum	**Maximum**
Frost-free period (days):	104	119
Freeze-free period (days):	134	145
Mean annual precipitation (inches):	9	14

Monthly moisture (inches) and temperature (^{0}F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.52	1.79	7.6	45.6
February	.43	1.56	10.7	50.4
March	.67	1.92	16.8	56.8
April	.52	1.26	22.7	66.0
May	.62	1.26	28.8	75.5
June	.49	1.21	35.1	85.8
July	1.54	3.41	42.1	88.9
August	1.86	3.72	41.8	85.8
September	1.08	1.86	34.6	78.8
October	1.01	1.86	25.3	68.6
November	.71	1.60	16.2	56.0
December	.56	1.49	9.3	47.0

Climate Stations:

				Period			
Station ID	292241	Location	Cuba, NM	From:	01/01/14	To:	12/31/01
Station ID	293422	Location	Gallup FAA-AP, NM	From:	01/01/21	To:	12/31/01

INFLUENCING WATER FEATURES

Narrative:

This site is not influenced by water from a wetland or stream.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:
N/A

REPRESENTATIVE SOIL FEATURES

Narrative:

Soils are of alluvial material and are generally moderately deep and well drained. They have stony or very stony loam or clay loam surface horizons. They are stony throughout the profile. Infiltration and internal water movement is good. They have a high water-holding capacity, adequate for holding all normal precipitation.

Parent Material Kind: Colluvium
Parent Material Origin: Limestone-ss-shale

Surface Texture:

1. Stony loam
2. Very stony loam
3. Stony clay loam 4. Very stony clay loam 5. Cobbly loam 6. Very stony silt loam

Surface Texture Modifier:

1. Stone
2. Cobble

Subsurface Texture Group: Loamy

Surface Fragments <=3" (% Cover): N/A

Surface Fragments >3" (% Cover): 35 to 60

Subsurface Fragments <=3" (%Volume): N/A

Subsurface Fragments >=3" (%Volume): 35 to 60

	Minimum	**Maximum**
Drainage Class:	Well	Well
Permeability Class:	Moderately slow	Moderate
Depth (inches):	40	60
Electrical Conductivity (mmhos/cm):	Unknown	Unknown
Sodium Absorption Ratio:	Unknown	Unknown
Soil Reaction (1:1 Water):	Unknown	Unknown
Soil Reaction (0.1M CaCl2):	Unknown	Unknown
Available Water Capacity (inches):	9	12
Calcium Carbonate Equivalent (percent):	Unknown	Unknown

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label**: HCPC

Plant Community Narrative: Historic Climax Plant Community
This site is a mixed grass/shrubland complex having an overstory of scattered oneseed juniper and pinyon pine. Mountain big sagebrush and cool-season grasses dominate but warm-season grasses and forbs do occur in lesser amounts.

Canopy Cover:	
Trees, shrubs and half-shrubs	25 %
Ground Cover (Aveage Percent of Surface Area).	
Grasses & Forbs	17
Bare ground	48
Surface gravel	20
Surface cobble and stone	5
Litter (percent)	10
Litter (average depth in cm.)	1

Plant Community Annual Production (by plant type):

Annual Production (lbs/ac)

Plant Type	Low	RV	High
Grass/Grasslike	210	308	405
Forb	46	67	88
Tree/Shrub/Vine	81	118	155
Lichen			
Moss			
Microbiotic Crusts			
Total	350	513	675

Plant Community Composition and Group Annual Production: Plant species are grouped by annual production **not** by functional groups.

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	PASM	Western Wheatgrass	103 – 154	103 – 154
2	ACHY	Indian Ricegrass	77 – 103	77 – 103
3	BOCU	Sideoats Grama	41 – 62	41 – 62
4	KOMA BOGR2 ELEL5	Prairie Junegrass Blue Grama Bottlebrush Squirreltail	26 – 41	26 – 41
5	SCSC 2GRAM	Little Bluestem Other Grasses	21 – 36	21 – 36

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
6	ASTER ERIOG ASTRA OPPO	Aster spp. Wildbuckwheat spp. Astragalus spp. Plains Prickly Pear Cactus	26 – 36	26 – 36
7	SPCO	Scarlet Globemallow	10 – 15	10 – 15
8	CACO17	Indian Paintbrush	26 – 36	26 – 36
9	2FP	Perennial Forbs	10 – 26	10 - 26

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
10	ARTR2	Mountain Big Sagebrush	51 – 77	51 – 77
11	ATCA2	Fourwing Saltbush	15 – 26	15 – 26
12	RIMO2	Gooseberry (currant)	T – 5	T – 5
13	JUMO PIED	Oneseed Juniper Pinyon Pine	21 – 31	21 – 31
14	YUCCA	Yucca spp.	T – 10	T – 10
15	FAPA	Apacheplume	5 – 15	5 – 15

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Other species include: dropseed spp., threeawn spp., and broom snakeweed.

Plant Growth Curves

Growth Curve ID **0003NM**

Growth Curve Name: **HCPC**

Growth Curve Description: **Cool-season grassland with a shrub complex and scattered juniper/pinyon overstory and a minor warm-season grass and forb component.**

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	10	10	25	30	12	5	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

This site provides habitats which support a resident animal community that is characterized by pronghorn antelope, gray fox, Nuttall's cottontail, rock squirrel, pinyon mouse, scrub jay, plain titmouse, and fence lizard. These sites are important sources of winter food and cover for mule deer, elk, mountain bluebird and jays.

Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations	
Soil Series	**Hydrologic Group**

Recreational Uses:

There is fairly good opportunity for hunting at higher elevations. It is fair for picnicking and hiking. This site has fair aesthetic appeal and natural beauty qualities, which is enhanced by the close proximity to a mountain setting.

Wood Products:

Although limited in potential, some wood products such as fence posts, fuel wood and landscape trees are produced on this site.

Other Products:

Grazing:

Approximately 80 percent of the vegetation produced on this site are suitable for grazing or browsing by domestic livestock and wildlife. Grazing distribution generally is not a problem if adequate waterings are provided. Continuous grazing, which allows repetitive grazing of the desirable species, eventually leads to a decrease in these species from the plant community. Such deterioration is indicated by a decrease in western wheatgrass, Indian ricegrass, sideoats grama, prairie junegrass and fourwing saltbush. Species that increase include blue grama, threeawn spp., broom snakeweed, big sagebrush, oneseed juniper and pinyon pine. A planned grazing system with periodic deferment is best to maintain the desirable balance between plant species and to maintain high productivity.

In addition to domestic livestock, deer, pronghorn antelope, small mammals and birds also use this site.

Other Information:

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	Ac/AUM
100 - 76	5.1 – 6.8
75 – 51	6.6 – 10.2
50 – 26	10.0 – 20.3
25 – 0	20.3+

Plant Part	Code	Species Preference	Code
Stems	**S**	**None Selected**	**NS**
Leaves	**L**	**Preferred**	**P**
Flowers	**F**	**Desirable**	**D**
Fruits/Seeds	**F/S**	**Undesirable**	**U**
Entire Plant	**EP**	**Not Consumed**	**NC**
Underground Parts	**UP**	**Emergency**	**E**
		Toxic	**T**

Plant Preference by Animal Kind:

Animal Kind: Livestock

Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Indian Ricegrass	Achnatherum hymenoides	EP	P	P	P	P	P	P	P	P	P	P	P	P
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Prairie Junegrass	Koeleria macrantha	EP	D	D	D	D	D	D	D	D	D	D	D	D
Fourwing Saltbush	Atriplex canescens	L/S	P	P	P	P	P	D	D	D	D	D	D	P

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites: _____

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: **New Mexico**

County: **Taos**

Latitude: _____

Longitude: _____

Township: _____

Range: _____

Section: _____

Is the type locality sensitive? **Yes** ☐ **No** ☐

General Legal Description: _____

Relationship to Other Established Classifications:

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the New Mexico and Arizona Plateaus and Mesas 36 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: Taos

Characteristic Soils Are:	
Fernando	Raton
Other Soils included are:	

Site Description Approval:

Author	Date	Approval	Date
Don Sylvester		Don Sylvester	

Site Description Revision:

Author	Date	Approval	Date
Elizabeth Wright	08/06/02	George Chavez	09/11/02